

REMARKS

We are in receipt of the Office Action dated March 2, 2004, and the following remarks are made in light thereof.

Claims 1-40 are pending in the application. Pursuant to the Office Action, claims 1-35 stand rejected under 35 USC 103 as being unpatentable over Black, Jr. et al. 5,403,604 in view of Lawhon et al. 4,643,902, Dechow et al. 4,522,836 and Puri 4,439,458. Claims 26-40 stand rejected under 35 USC 103(a) as being unpatentable over the combined references applied to claims 1-35, and further in view of Norman et al. 4,666,721. The claims are rejected for the reasons of record cited in the Office Action of September 17, 2003. The action is made final.

Initially, applicant notes that there was no indication in the Office Action of March 2, 2004 that the examiner considered Huffman 3,801,717 and the section from Citrus Nutrition & Quality, Steven Nagy and John A. Attaway, editors, Chapter 11 "Citrus Juice Processing as Related to Quality and Nutrition," by Charles Varsel. These references were cited in the Information Disclosure Statement filed by mail on December 31, 2001, and copies were provided to the Examiner with the Response filed by mail on January 14, 2004. Applicant encloses a Form 1449 listing these two references, and requests that the examiner check the appropriate boxes indicating the consideration of these references and enclosing a copy of the same in any response to this Response After Final.

Turning the examiner's response to applicant's arguments, applicant respectfully submits that the examiner misapprehends the significance of Lawhon et al., and its applicability to the claimed invention is incorrect.

Each of the independent claims 1, 22, 33, 34, and 35 calls for the step of providing an initial single strength juice flow having suspended solids. A portion of this initial flow is added to the deacidified juice flow immediately or promptly after deacidification. This is required because, at least in the initial stages of deacidification when the resin column is most effective, the acidity level of the deacidified juice may be sufficiently low that undesirable microbial activity in the deacidified juice could occur. See the specification, paragraphs [0055]-[0056]. This is a different step from the blending of the deacidified juice with a second portion of the initial citrus juice flow to achieve a final blend. This is what is referred to in paragraph [0062], cited by the examiner in her response to the applicant's arguments. While the term "immediately" is not defined, it can be seen by reference to Fig. 1 that the add-back is accomplished immediately after deacidification. Specifically, a portion of the untreated initial single-strength juice is diverted to the bypass line 15 and is added to the deacidified juice upon its exit from the resin columns. This also clarifies that this portion of the initial juice flow is not combined in a batch tank, as is the

case with the final blending. By the foregoing Amendment, the claims have been revised to emphasize this aspect of the invention.

In contrast, Lawhon et al. does not teach using a portion of the initial juice flow to combine with the reduced-acid portions. Instead, Lawhon et al. uses the remainder of the non-reduced-acid RO retentate or UF permeate. See column 6, lines 28-32. Thus, Lawhon et al. uses a separated stream from a part of its ultra filtration process, while the present invention uses a non-separated initial juice stream. In addition, Lawhon et al. adds back the non-acid-reduced portion in juice reconstitution in order to make a final blend, and not immediately after deacidification to prevent microbial activity as in the present invention. Indeed, Lawhon et al. teaches that the reduced acid product may be passed through a bacteriological filter 22 prior to recombining to reduce microbial activity. See column 6, lines 24-27. Thus, Lawhon et al. implicitly recognizes the vulnerability of waiting until the final blending to increase the acidity to a level that discourages microbial activity.

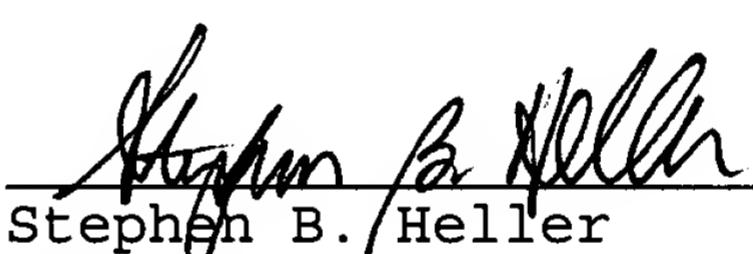
Each of the independent claims 1, 14, 33 and 34 require that the juice flow be at a temperature of about 45°F. or below, despite the negative effect of this relatively low temperature on the efficiency of the solid/liquid separation and the acid reduction. The examiner argues that Lawhon et al. was cited "to

show that it was known that high temperatures will volatize aroma and flavor components in juices." The "lower temperature" of 23°C. disclosed in Lawhon et al. converts to 73°F., which is still significantly greater than the 45°F. recited in the claims. Additionally, Lawhon et al. recommends a processing temperature of 35°C., which converts to 95°F., which raises the membrane flux. See column 9, lines 28-39. Thus, Lawhon et al. teaches away from the low temperature required in the pending claims in order to enhance its process efficiency.

Accordingly, applicant respectfully requests the examiner to reconsider and withdraw the rejection of the pending claims and to allow the application.

Respectfully submitted,

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